

What is Claimed is:

- [c1] 1. A system for providing symmetrical connectivity between at least two consumer premises equipment telecommunications devices, comprising: at least two consumer premises equipment telecommunications devices operatively connected over an asynchronous transfer mode telecommunications network, wherein the at least two consumer premises equipment telecommunications devices are configured to perform local tone generation, local tone detection and decoding, and direct transfer and decoding of dialed digits.
- [c2] 2. The system of claim 1, wherein the at least two consumer premises equipment telecommunications devices are further configured to generate, exchange and decode state transition signaling messages.
- [c3] 3. The system of claim 2, wherein the state transition signaling messages are transported using channel associated signaling secondary service packets.
- [c4] 4. The system of claim 3, wherein the channel associated signaling secondary service packets comprise 8 bytes of information.
- [c5] 5. The system of claim 3, wherein the channel associated signaling secondary service packets include a channel identification value and a connection identification value.
- [c6] 6. The system of claim 1, wherein the at least two consumer premises equipment telecommunications devices are further configured to generate, exchange and decode dialed digit packets, wherein the dialed digit packets represent numbers dialed on at least one of the consumer premises equipment telecommunications devices.
- [c7] 7. The system of claim 6, wherein the dialed digit packets comprise 9 bytes of information.
- [c8] 8. The system of claim 6, wherein the dialed digit packets include a channel identification value and a connection identification value.

[c9] 9.The system of claim 1, wherein each of the at least two consumer premises equipment telecommunications devices further comprise a state machine for transitioning each of the at least two consumer premises equipment telecommunications devices into a plurality of operational states triggered by a plurality of events.

[c10] 10.The system of claim 9, wherein the plurality of operational states include an ONHOOK state, an OFFHOOK state; a DIALTONE state, a RINGING state, a RINGBACK state, and a TALKING state.

[c11] 11.The system of claim 9, wherein the plurality of events include local events and a plurality of signaling messages from another of the at least two consumer premises equipment telecommunications devices.

[c12] 12.The system of claim 11, wherein local events include going onhook and going offhook.

[c13] 13.The system of claim 11, wherein the plurality of signaling messages include a TALK message, a TEARDOWN message, a RINGING message, a BUSY message, and an ERROR message.

[c14] 14.A method for providing symmetrical connectivity between at least two consumer premises equipment telecommunications devices, comprising the steps of:
operatively connecting at least two consumer premises equipment telecommunications devices over an asynchronous transfer mode telecommunications network;
configuring the at least two consumer premises equipment telecommunications devices to perform local tone generation;
configuring the at least two consumer premises equipment telecommunications devices to perform local tone detection and decoding; and
configuring the at least two consumer premises equipment telecommunications devices to perform direct transfer and decoding of dialed digits.

[c15] 15.The method of claim 14, further comprising the step of configuring the at least two consumer premises equipment telecommunications devices to

generate, exchange and decode state transition signaling messages.

- [c16] 16. The method of claim 15, further comprising the step of transporting the state transition signaling messages are using channel associated signaling secondary service packets.
- [c17] 17. The method of claim 16, wherein the channel associated signaling secondary service packets comprise 8 bytes of information.
- [c18] 18. The method of claim 16, wherein the channel associated signaling secondary service packets include a channel identification value and a connection identification value.
- [c19] 19. The method of claim 14, further comprising the step of configuring the at least two consumer premises equipment telecommunications devices to generate, exchange and decode dialed digit packets, wherein the dialed digit packets represent numbers dialed on at least one of the consumer premises equipment telecommunications devices.
- [c20] 20. The method of claim 19, wherein the dialed digit packets comprise 9 bytes of information.
- [c21] 21. The method of claim 20, wherein the dialed digit packets include a channel identification value and a connection identification value.
- [c22] 22. The method of claim 14, further comprising the step of transitioning each of the at least two consumer premises equipment telecommunications devices into a plurality of operational states triggered by a plurality of events.
- [c23] 23. The method of claim 22, wherein the plurality of operational states include an ONHOOK state, an OFFHOOK state; a DIALTONE state, a RINGING state, a RINGBACK state, and a TALKING state.
- [c24] 24. The system of claim 23, wherein the plurality of events include local events and a plurality of signaling messages from another of the at least two consumer premises equipment telecommunications devices.
- [c25] 25. The method of claim 24, wherein local events include going onhook and

going offhook.

[c26] 26. The method of claim 25, wherein the plurality of signaling messages include a TALK message, a TEARDOWN message, a RINGING message, a BUSY message, and an ERROR message.

[c27] 27. The method of claim 26, further comprising the steps of:
transitioning the at least two consumer premises equipment telecommunications devices from the ONHOOK state into the DIALTONE state upon the occurrence of the going offhook local event;
transitioning the at least two consumer premises equipment telecommunications devices from the DIALTONE state into the ONHOOK state upon the occurrence of the going onhook local event;
transitioning the at least two consumer premises equipment telecommunications devices from the OFFHOOK state into the ONHOOK state upon the occurrence of the going onhook local event;
transitioning the at least two consumer premises equipment telecommunications devices from the RINGBACK state into the ONHOOK state upon the occurrence of the going onhook local event;
transitioning the at least two consumer premises equipment telecommunications devices from the TALKING state into the ONHOOK state upon the occurrence of the going onhook local event;
transitioning the at least two consumer premises equipment telecommunications devices from the ONHOOK state into the RINGING state upon the receipt of dialed digit packets corresponding to the respective consumer premises equipment telecommunications device;
transitioning the at least two consumer premises equipment telecommunications devices from the DIALTONE state into the OFFHOOK state upon receipt of the occurrence of the BUSY signaling message;
transitioning the at least two consumer premises equipment telecommunications devices from the DIALTONE state into the OFFHOOK state upon receipt of the occurrence of the ERROR signaling message;
transitioning the at least two consumer premises equipment telecommunications devices from the DIALTONE state into the RINGBACK state

upon receipt of a RINGING signaling message;
transitioning the at least two consumer premises equipment
telecommunications devices from the RINGBACK state into the TALKING state
upon the receipt of a TALK signaling message; and
transitioning the at least two consumer premises equipment
telecommunications devices from the TALKING state into the DIALTONE state
upon receipt of the occurrence of the TEARDOWN signaling message.

[c28] 28. A method for providing symmetrical connectivity between at least two consumer premises equipment telecommunications devices, comprising the steps of:
receiving, at a first consumer premises equipment telecommunications device, a going offhook local event;
transitioning the first consumer premises equipment telecommunications device into a DIALTONE state;
transmitting dialed digit packets representative of the second consumer premises equipment telecommunications device from the first consumer premises equipment telecommunications device to a second consumer premises equipment telecommunications device operatively connected to the first consumer premises equipment telecommunications device; and
determining whether the second consumer premises equipment telecommunications device is in an ONHOOK state.

[c29] 29. The method of claim 28, further comprising the steps of if it is determined that the second consumer premises equipment telecommunications device is in the ONHOOK state:
transitioning the second consumer premises equipment telecommunications device into a RINGING state;
generating a RINGING tone at the second consumer premises equipment telecommunications device;
transmitting a RINGING signaling message from the second consumer premises equipment telecommunications device to the first consumer premises equipment telecommunications device;
transitioning the first consumer premises equipment telecommunications device

into a RINGBACK state;
generating a RINGBACK tone at the first consumer premises equipment telecommunications device;
receiving, at the second consumer premises equipment telecommunications device, a going offhook local event;
transitioning the second consumer premises equipment telecommunications device into a TALKING state;
transmitting a TALK signaling message from the second consumer premises equipment telecommunications device to the first consumer premises equipment telecommunications device; and
transitioning the first consumer premises equipment telecommunications device into a TALKING state.

[c30] 30. The method of claim 29, further comprising the steps of:
receiving a local going onhook event at the first consumer premises equipment telecommunications device;
transitioning the first consumer premises equipment telecommunications device into the ONHOOK state;
transmitting a TEARDOWN signaling message from the first consumer premises equipment telecommunications device to the second consumer premises equipment telecommunications device; and
transitioning the second consumer premises equipment telecommunications device into the DIALTONE state.

[c31] 31. The method of claim 28, further comprising the steps of if it is determined that the second consumer premises equipment telecommunications device is not in the ONHOOK state:
transmitting a BUSY signaling message from the second consumer premises equipment telecommunications device to the first consumer premises equipment telecommunications device; and
transitioning the first consumer premises equipment telecommunications device into an OFFHOOK state.